

REMARKS/ARGUMENTS

In this Amendment Under 37 C.F.R. § 1.111 ("Sixth Amend"), Applicants amend claims 22-25, 30-34, and 36-38 in order to better define the claimed invention, to improve clarity, and/or to correct typographical errors. Applicants also add new claim 42. No new matter is introduced.

Prior to entry of the Sixth Amend, claims 22-41 were pending in the application. After entry of the Sixth Amend, claims 22-42 are pending in the application.

In the Sixth OA, the Examiner appeared to reject claims 22-30 and 35-41¹ under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,838,752 to Berkovitz ("Berkovitz I")² in view of U.S. Patent No. 5,429,211 to Aulanko et al. ("Aulanko I"),³ and further in view of U.S. Patent No. 4,158,283 to Nation ("Nation"); and reject claims 31-34 under 35 U.S.C. § 103(a) as being unpatentable over Berkovitz I in view of Aulanko I, further in view of Nation, and yet further in view of World Intellectual Property Organization ("WIPO") International Publication No. WO 99/43595 to Hollowell et al. ("Hollowell").

¹ Page 2 of the Sixth OA indicates that only claims 22, 23, 26-30, and 35-41 are rejected under 35 U.S.C. § 103(a). However, under that same heading on pages 5 and 6 of the Sixth OA, claims 24 and 25 are also discussed.

² Labeled as Berkovitz I in order to distinguish it from previously cited U.S. Patent No. 4,030,569 to Berkovitz ("Berkovitz II").

³ Labeled as Aulanko I in order to distinguish it from previously cited U.S. Patent No. 5,665,944 to Aulanko et al. ("Aulanko II").

Incorporation of Previous Arguments by Reference

In addition to the arguments presented below, Applicants specifically incorporate by reference the arguments made in the Amendment Under 37 C.F.R. § 1.111 ("First Amend") filed on January 3, 2006; the Amendment After Final Under 37 C.F.R. § 1.116 ("First AAF") filed on November 1, 2006; the Amendment Under 37 C.F.R. § 1.111 ("Second Amend") filed on July 16, 2007; the Amendment Under 37 C.F.R. § 1.111 ("Third Amend") filed on April 22, 2008; the Amendment Under 37 C.F.R. § 1.111 ("Fourth Amend") filed on November 28, 2008; the Amendment Under 37 C.F.R. § 1.114 ("First 114 Amend") filed on July 24, 2009; the Amendment Under 37 C.F.R. § 1.111 ("Fifth Amend") filed on November 23, 2009; and the Amendment After Final Under 37 C.F.R. § 1.116 ("Second AAF") filed on May 27, 2010.

IDS Documents—First Form HDP-1449

On October 15, 2009, Applicants filed an Information Disclosure Statement ("IDS") that included a Form HDP-1449 listing twelve (12) documents. In a Final Office Action ("Third FOA") mailed on April 14, 2010, the Examiner returned the Form HDP-1449, but crossed out eleven of the twelve listed documents. In particular, the Examiner crossed out—without explanation or justification—the nine documents listed on the first Form HDP-1449 attached to this Sixth Amend, for which abstracts were provided with the IDS.

Applicants submit that these nine documents should have been considered by the Examiner. For at least this reason, Applicants request that the Examiner properly consider these nine documents, indicate such consideration on the attached first Form HDP-1449, and return the initialed first Form HDP-1449 in the next paper mailed by the U.S. Patent and Trademark Office ("USPTO").

Applicants note that the Public Patent Application Information Retrieval ("Public PAIR") system indicates that the USPTO has scanned copies of these nine documents on file. However, Applicants also note that the scanned copy of JP 6-263369 does not appear to have an English-language abstract associated with that document, although such an abstract was filed with the IDS. As a result, Applicants resubmit that English-language abstract as an attachment to this Sixth Amend.

IDS Documents—Second Form HDP-1449

As discussed above, on October 15, 2009, Applicants filed an IDS that included a Form HDP-1449 listing twelve (12) documents. In the Third FOA, the Examiner returned the Form HDP-1449, but crossed out eleven of the twelve listed documents. In particular, the Examiner crossed out the two documents listed on the second Form HDP-1449 attached to this Sixth Amend.

Applicants submit that—as indicated in the IDS—these two documents are Japanese Office Actions dated December 21, 2006, and December 13, 2007, for corresponding Japanese patent application No. 2002-554612. The

two Japanese Office Actions reject the associated claims in view of the listed references. In particular, both Japanese Office Actions discuss claim limitations related to hoisting rope diameters greater than 5 mm and less than 7 mm.

Applicants request that the Examiner properly consider these two documents, indicate such consideration on the attached second Form HDP-1449, and return the initialed second Form HDP-1449 in the next paper mailed by the USPTO.

Applicants note that the Public PAIR system appears to indicate that the USPTO has scanned copies of these two documents on file. In particular, the scanned seven (7) page Non-Patent Literature document dated October 15, 2009, should represent the Technical Examination Report dated June 22, 2009, and the two Japanese Office Actions filed with IDS.

Cited Art

Applicants note with concern the apparent reference on page 8 of the Sixth OA to WIPO International Publication No. WO 02/074677 A2 to Aulanko et al. ("Aulanko III") and U.S. Patent No. 7,461,721 B2 to Aulanko et al. ("Aulanko IV") as "prior art". Both Aulanko III and Aulanko IV have an effective U.S. filing date of February 25, 2002.

In contrast, the present application is a continuation of International Application No. PCT/EP01/15380, filed on December 31, 2001, in the Receiving Office of the European Patent Office, and claims priority from that

application, German Patent Application No. 101 00 707.8, filed on January 4, 2001, in the German Patent and Trade Mark Office (“GPATMO”), and German Patent Application No. 101 39 339.3, filed on August 10, 2001, in the GPATMO.

For at least these reasons, Applicants submit that neither Aulanko III nor Aulanko IV is prior art to the present application.

Nation

Applicants submit that the Sixth OA demonstrates a variety of misconceptions regarding Nation, as discussed below.

The Sixth OA disingenuously states that:

Nation reviews the performance of ¼-inch wires of titanium alloy and stainless steel, thereby the generation of smaller diameter cables comprising said wires that “. . . overcomes a stiffness problem to provide flexibility, the essential system handling characteristic”, thereby enabling a reduced D/d ratio of 25 to 30 (Col. 6, L. 40) as well.

Sixth OA, p. 4.

Applicants are not able to find the quoted language in Nation. Perhaps the Sixth OA intended the following quotation from Nation: “[t]he stiffness problem is overcome by using small (diam.) wires to provide flexibility, the essential system handling characteristic” (Nation, c.1/ll. 55-57)?

Applicants submit that the Sixth OA does not appear to appreciate the differentiation in Nation between “cables” and “wires”, recited, for example, as:

At low-loading, bend stress effects completely disappeared in 7×19 ti cable (133 wires), and virtually

disappeared in 7x7 titanium cable (49 wires), at D/d ratios of 25 to 30, FIG. 2, whereas established ratios of these same steel constructions (shown in handbooks) are at least doubled. It should be noted d represents cable diameter in this case, not wire diameter.

Id., c. 6/ll. 37-43. As may be observed, Nation discloses 1/4-inch cables comprising titanium and aluminum wires, as well as 1/4-inch cables comprising steel wires, and discusses overcoming stiffness in steel cables by using smaller diameter steel wires. Thus, Nation does not review the performance of 1/4-inch wires of titanium alloy and stainless steel, as alleged on page 4 of the Sixth OA, nor does Nation review the generation of smaller diameter cables comprising said 1/4-inch wires, as also alleged on page 4 of the Sixth OA.

Nation's "review" of the performance of steel wires and cables includes at least the following eleven negative comments: (1) "[s]teel wire and cable are noted for rapid fatigue especially in worn and case hardened areas in the cable assembly" (id., c. 1/ll. 37-39); (2) "[a]t points where the wire of one strand cross those of another strand at an angle, wire pressure and relative movement between wires cause sawing and case hardening" (id., c. 1/ll. 39-42); (3) "[u]nder repeated bending, dynamic stressing under work load causes rapid wear and fatigue; notches wear in the wires at points of cross wire contact that leads to both wear and fatigue fractures, and progressive, and even rapid failure of the cable" (id., c. 1/ll. 42-46); (4) "[t]his physical notching characteristic with attendant case hardening and embrittlement, causes rapid fatigue under bending action" (id., c. 1/ll. 47-49); (5) because of impact stress,

“[w]ire fractures, or over-stressing (even cable fracture) frequently occur in high stress regions due to low dynamic properties of steel wire” (id., c. 2/ll. 1-7); (6) “[s]train hardening, as it operates in the plastic load range of wire, is known to fatigue steel to a much greater extent than ti upon which this phenomenon has little effect” (id., c. 2/ll. 35-38); (7) “[b]oth commonly used steel materials, carbon and stainless (corrosion resistant) are non-linear in load deflection . . . [t]hus fatigue accelerates from the combination of tension peaks and loads in excess of the above mentioned limits, primarily caused by high tension peaks in non-linear material” (id., c. 3/ll. 2-7); (8) “[t]he steel stiffness characteristic, as a problem in cable handling, converts into an effective spring characteristic in ti cable, as to be discussed, which also avoids cable kinking and ‘bird-caging’ when stiffness changes to springiness” (id., c. 6/ll. 55-59); (9) “[t]his understanding should also include that performing work embodies continuous absorbing, storing and dissipating energy, wherein steel cable weakness is in passive dynamic energy control” (id., c. 10/ll. 13-16); (10) regarding steel, “[b]end stresses have a marked fatiguing effect at D/d ratios between 15 and 40, at the same strength and in the same construction” (id., c. 13/ll. 33-35); and (11) regarding steel, “[w]ire crowns in corrosion resistant steel become severely abraided in service, and in comparative cycling, contributed to early failure at low loading . . . [a]brasision of carbon steel is also severe but the rate is somewhat slower” (id., c. 13/ll. 36-40). Thus, to the extent that the Sixth OA might be read to imply that steel cables/wires are equivalent to titanium

cables/wires, Applicants submit that such a reading would contradict the disclosure of Nation. Instead, Applicants submit that Nation effectively teaches away from steel cables in favor of titanium cables and/or aluminum cables.

Nation, Abstract and Background of the Invention.

Additionally, Applicants note that while c. 9/ll. 5-7 of Nation discuss steel cables for hoists, cranes, mine shafts, and elevators, the steel cables under discussion have a 1 inch (25.4 mm) diameter, as discussed in Nation at c. 8/ll. 49-50 (“assume for example, a 1” 6×37 steel wire rope”) and c. 9/ll. 5-7 (“[o]n the other hand, had this been a 1” 6×37 titanium cable”). And although Nation discusses ¼-inch cables of stainless steel, Applicants submit that discussion relates to the tests conducted, not to the steel cables for hoists, cranes, mine shafts, and elevators that, as discussed above, have a 1 inch (25.4 mm) diameter. Thus, Applicants submit the Sixth OA’s allegation that Nation “teaches wherein each cable of an elevator, hoist crane or mine shafts (Col. 9, L. 7) is a steel cable, wherein each cable has a nominal diameter greater than 5 mm and less than 7 mm” (Sixth OA, p. 4) is incorrect on its face.

Moreover, Applicants submit the Sixth OA’s allegation that Nation enables “a reduced D/d ratio of 25 to 30 (Col. 6, L. 40)” misinterprets the disclosure of Nation. The relevant wording states:

At low-loading, bend stress effects completely disappeared in 7×19 ti cable (133 wires), and virtually disappeared in 7×7 titanium cable (49 wires), at D/d ratios of 25 to 30, FIG. 2, whereas established ratios of these same steel constructions (shown in handbooks)

are at least doubled. It should be noted d represents cable diameter in this case, not wire diameter.

Id., c. 6/ll. 37-43. Applicants submit this paragraph indicates that bend stress effects completely or virtually disappeared in the $\frac{1}{4}$ -inch titanium cables tested in Nation at D/d ratios of 25 to 30, but that those effects in similar $\frac{1}{4}$ -inch steel cables (as shown in handbooks) did not completely or virtually disappear until D/d ratios of at least 50 to 60. Thus, Applicants submit the Sixth OA's implication that Nation enables "a reduced D/d ratio of 25 to 30" for steel cables (Sixth OA, p. 4) also is incorrect on its face.

Section 103(a) Rejection—Berkovitz I/Aulanko I/Nation

Applicants submit that amended independent claims 22, 36, and 37 are patentable under 35 U.S.C. § 103(a) over any proper combination of Aulanko I, Berkovitz I, and/or Nation for at least the following reasons.

First, Applicants concur with the Sixth OA's admission that Berkovitz I does not disclose "[a]n elevator without machine room", as recited in amended independent claims 22, 36, and 37. Sixth OA, p. 3.

Second, Applicants concur with the Sixth OA's admission that Berkovitz I does not disclose "wherein each hoisting rope of the plurality of parallel hoisting ropes has a nominal diameter greater than 5 mm and less than 7 mm", as recited in amended independent claims 22, 36, and 37. Id.

Third, Applicants note that Berkovitz I discusses diameters for hoisting ropes of 1.2 inches (30.5 mm), 3/4 inches (19.1 mm), 5/8 inches (15.9 mm), 9/16 inches (14.3 mm), and 1/2 inch (12.7 mm). Berkovitz I, c. 1/l. 34,

c. 3/ll. 27-28, c. 3/l. 57, c. 5/l. 4, and c. 6/l. 55. Applicants submit that each of these diameters is much larger than the claimed "greater than 5 mm and less than 7 mm".

Fourth, Applicants submit that Berkovitz I implicitly limits its disclosure to hoisting ropes with diameters of 1/2 inch (12.7 mm) and greater, stating:

The undercut 32 shown in FIG. 3A may be changed to an undercut 32' shown in FIG. 3B, which has a width dimension of only about 3/16 inch for 1/2 inch rope, compared with the wide 3/8 inch used in the prior art for 1/2 inch rope. This new ratio of 0.375 of undercut width W to rope diameter D would be used for larger diameter rope.

Id., c. 5/ll. 2-8 (emphasis added); and

As illustrated in FIG. 7B, which is a fragmentary cross-sectional view of drive sheave 82' taken generally along a line between arrows VII-VII, a small undercut of 3/16 inch for 1/2 inch rope, and larger according to the same ratio for larger diameter rope, along with the synthetic lubricant, provides sufficient tractive effort for a gearless system, eliminating the necessity for the double wrap shown in FIG. 6A.

Id., c. 6/l. 52-59 (emphasis added).

Fifth, Applicants concur with the Sixth OA's effective admission that Berkovitz I does not disclose "wherein a ratio of a diameter of the drive sheave to a nominal diameter of each hoisting rope of the plurality of parallel hoisting ropes is greater than or equal to 30:1 and less than 40:1", as recited in amended independent claims 22 and 37; or "wherein a ratio of a diameter of the drive sheave to a nominal diameter of each hoisting rope of the plurality of

parallel hoisting ropes is substantially 30:1", as recited in amended independent claim 36. Sixth OA, p. 3.

Sixth, Applicants concur with the Sixth OA's effective admission that Berkovitz I does not disclose "wherein the undercut portions have a width greater than 1 mm and less than 3 mm", as recited in amended independent claims 22 and 36.

Seventh, Applicants note that Berkovitz I discusses grooves with undercut portions having widths of 3/8 inches (9.5 mm) and 3/16 inches (4.8 mm). Berkovitz I, c. 1/ll. 33-34, c. 3/l. 57, c. 5/ll. 4-6, and c. 6/l. 55. Applicants submit that each of these diameters is much larger than the claimed "greater than 1 mm and less than 3 mm".

Eighth, Applicants submit that Berkovitz I implicitly limits its disclosure to undercut portions having widths of 3/16 inch (4.8 mm) and greater, stating:

The undercut 32 shown in FIG. 3A may be changed to an undercut 32' shown in FIG. 3B, which has a width dimension of only about 3/16 inch for 1/2 inch rope, compared with the wide 3/8 inch used in the prior art for 1/2 inch rope. This new ratio of 0.375 of undercut width W to rope diameter D would be used for larger diameter rope.

Id., c. 5/ll. 2-8 (emphasis added); and

As illustrated in FIG. 7B, which is a fragmentary cross-sectional view of drive sheave 82' taken generally along a line between arrows VII-VII, a small undercut of 3/16 inch for 1/2 inch rope, and larger according to the same ratio for larger diameter rope, along with the synthetic lubricant, provides sufficient tractive effort for a gearless system, eliminating the necessity for the double wrap shown in FIG. 6A.

Id., c. 6/l. 52-59 (emphasis added).

Ninth, the Sixth OA's purported argument appears to gloss over significant differences between the prior art in Berkovitz I and the invention of Berkovitz I. Applicants submit that FIGs. 3A, 6A, 6B, and 9A refer to the prior art of Berkovitz I, while FIGs. 3B, 7A, 7B, and 9B refer to the invention of Berkovitz I. Thus, the Sixth OA's reference to drive sheave 82, secondary sheave 84, rope 86, and double-wrap roping in FIG. 6A (Sixth OA, pp. 2-3) relates to the prior art in Berkovitz I. Similarly, the Sixth OA's reference to undercut portions 32 in FIG. 3A (id., p. 3) relates to the prior art in Berkovitz I. And the corresponding ratio $W/D = 0.75$ (Berkovitz I, c. 3/l. 54-62) relates to the prior art in Berkovitz I. In contrast, the ratio $W/D = 0.375$ (id., c. 5/l. 54-62) cited in the Sixth OA (Sixth OA, p. 3) relates to the invention of Berkovitz I in which double-wrap roping is not used.

Tenth, other than stating that Aulanko I discloses "an elevator without machine room" (Sixth OA, p. 3), Applicants submit the Sixth OA does not argue that Aulanko I overcomes any of the deficiencies of Berkovitz I discussed above. For example, the Sixth OA does not argue that Aulanko I discloses any of "wherein each hoisting rope of the plurality of parallel hoisting ropes has a nominal diameter greater than 5 mm and less than 7 mm", "wherein the undercut portions have a width greater than 1 mm and less than 3 mm", "wherein a ratio of a diameter of the drive sheave to a nominal diameter of each hoisting rope of the plurality of parallel hoisting ropes is greater than or equal

to 30:1 and less than 40:1", and "wherein a ratio of a diameter of the drive sheave to a nominal diameter of each hoisting rope of the plurality of parallel hoisting ropes is substantially 30:1".

Eleventh, as discussed above, Applicants submit that Nation fails to overcome any of the deficiencies of Berkovitz I discussed above. For example, Applicants submit that Nation fails to discloses any of "wherein each hoisting rope of the plurality of parallel hoisting ropes has a nominal diameter greater than 5 mm and less than 7 mm", "wherein the undercut portions have a width greater than 1 mm and less than 3 mm", "wherein a ratio of a diameter of the drive sheave to a nominal diameter of each hoisting rope of the plurality of parallel hoisting ropes is greater than or equal to 30:1 and less than 40:1", and "wherein a ratio of a diameter of the drive sheave to a nominal diameter of each hoisting rope of the plurality of parallel hoisting ropes is substantially 30:1".

As discussed above, Applicants submit that Berkovitz I: (a) does not disclose "wherein each hoisting rope of the plurality of parallel hoisting ropes has a nominal diameter greater than 5 mm and less than 7 mm"; (b) discusses diameters for hoisting ropes that are much larger than the claimed "greater than 5 mm and less than 7 mm"; and (c) implicitly limits its disclosure to hoisting ropes with diameters of 1/2 inch (12.7 mm) and greater. And for at least the reasons discussed above, Applicants submit that neither Aulanko I nor Nation overcomes these deficiencies of Berkovitz I. As a result, Applicants submit that no proper combination of Aulanko I, Berkovitz I, and/or Nation

discloses, teaches, or suggests, for example, all of the recitations of amended independent claim 22, 36, or 37.

As also discussed above, Applicants submit that Berkovitz I: (a) does not disclose “wherein the undercut portions have a width greater than 1 mm and less than 3 mm”; (b) discusses widths of undercut portions that are much larger than the claimed “greater than 1 mm and less than 3 mm”; and (c) implicitly limits its disclosure to undercut portions having widths of 3/16 inch (4.8 mm) and greater. And for at least the reasons discussed above, Applicants submit that neither Aulanko I nor Nation overcomes these deficiencies of Berkovitz I. As a result, Applicants submit that no proper combination of Aulanko I, Berkovitz I, and/or Nation discloses, teaches, or suggests, for example, all of the recitations of amended independent claim 22, 36, or 37.

Additionally, as discussed above, Applicants submit that Berkovitz I does not disclose “wherein a ratio of a diameter of the drive sheave to a nominal diameter of each hoisting rope of the plurality of parallel hoisting ropes is greater than or equal to 30:1 and less than 40:1”, as recited in amended independent claims 22 and 37; or “wherein a ratio of a diameter of the drive sheave to a nominal diameter of each hoisting rope of the plurality of parallel hoisting ropes is substantially 30:1”, as recited in amended independent claim 36. And for at least the reasons discussed above, Applicants submit that neither Aulanko I nor Nation overcomes these deficiencies of Berkovitz I. As a

result, Applicants submit that no proper combination of Aulanko I, Berkovitz I, and/or Nation discloses, teaches, or suggests, for example, all of the recitations of amended independent claim 22, 36, or 37.

For all of these reasons, Applicants submit that amended independent claims 22, 36, and 37 are patentable under 35 U.S.C. § 103(a) over any proper combination of Aulanko I, Berkovitz I, and/or Nation. Applicants further submit that dependent claims 23-30, 35, and 38-41 are patentable under 35 U.S.C. § 103(a) over any proper combination of Aulanko I, Berkovitz I, and/or Nation, for at least the same reasons as amended independent claims 22 and 37, from which claims 23-30, 35, and 38-41 directly or indirectly depend.

Section 103(a) Rejection—Berkovitz I/Aulanko I/Nation/Hollowell

Applicants submit the Sixth OA does not argue that Hollowell overcomes the deficiencies of Aulanko I, Berkovitz I, and/or Nation discussed above. Therefore, Applicants submit that dependent claims 31-34 are patentable under 35 U.S.C. § 103(a) over any proper combination of Aulanko I, Berkovitz I, Hollowell, and/or Nation, for at least the same reasons as amended independent claim 22, from which claims 31-34 directly or indirectly depend.

New Dependent Claim 42

Applicants submit that new dependent claim 42 is patentable under 35 U.S.C. § 103(a) over any proper combination of Aulanko I, Berkovitz I,

Hollowell, and/or Nation, for at least the same reasons as amended independent claim 22, from which claim 42 directly depends.

In re Aller

As discussed in the First 114 Amend, the Sixth OA's statement that "it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art" (Sixth OA, pp. 5-6) demonstrates a misplaced reliance on In re Aller, 105 USPQ 233 (CCPA 1955) (copy submitted with the First 114 Amend).

In In re Aller, a single prior art reference disclosed an identical chemical process, with the exception of the temperature and sulfuric acid concentration involved. The alleged invention involved lowering the temperature and raising the sulfuric acid concentration. In stark contrast, the Sixth OA is attempting to combine portions of three references:

a first reference (Berkovitz I) from primary U.S. Classification 187/20 (and secondary U.S. Classifications 187/27 and 184/15);

a second reference (Aulanko I) from primary U.S. Classification 187/254 (and secondary U.S. Classification 187/406); and

a third reference (Nation) from primary U.S. Classification 57/200 (and secondary U.S. Classifications 75/175.5 and 148/11.5).

The Sixth OA's attempt to rely on Nation for a disclosure similar to "wherein each hoisting rope of the plurality of parallel hoisting ropes has a nominal diameter greater than 5 mm and less than 7 mm" (amended independent claims 22, 36, and 37) appears to indicate that the Examiner was

unable to find any reference in at least U.S. Classification 187/XXX or 184/XXX that discloses, teaches, or suggests this recitation. The Sixth OA does not appear to contradict this argument.

Similarly, the Sixth OA's attempt to rely on Nation for a disclosure similar to "wherein a ratio of a diameter of the drive sheave to a nominal diameter of each hoisting rope of the plurality of parallel hoisting ropes is greater than or equal to 30:1 and less than 40:1" (amended independent claims 22 and 37) and "wherein a ratio of a diameter of the drive sheave to a nominal diameter of each hoisting rope of the plurality of parallel hoisting ropes is substantially 30:1" (amended independent claim 36) appears to indicate that the Examiner was unable to find any reference in at least U.S. Classification 187/XXX or 184/XXX that discloses, teaches, or suggests either of these recitations. The Sixth OA also does not appear to contradict this argument.

Thus, Applicants submit that In re Aller is not logically relevant to the Examiner's argument at least because this is not a situation in which the general conditions of the claim are disclosed in the prior art. As a result, the Sixth OA's reliance on In re Aller is misplaced.

In re Rice

As discussed in the Fifth Amend, the Sixth OA's statement that "[m]inor differences between the prior art and a claimed device may be a matter of design choice absent evidence to the contrary" (Sixth OA, pp. 5-6)

demonstrates a misplaced reliance on In re Rice, 144 USPQ 476 (CCPA 1965) (copy submitted with the Fifth Amend), a case not cited in the MPEP.

In addition, Applicants submit that, as discussed below, the differences between the prior art and the recitation “wherein each hoisting rope of the plurality of parallel hoisting ropes has a nominal diameter greater than 5 mm and less than 7 mm” are not minor and, thus, are not a simple matter of design choice.

Thus, Applicants submit that In re Rice is not logically relevant to the Examiner’s argument at least because this is not a situation in which the differences between the prior art and the claimed device are minor. As a result, the Sixth OA’s reliance on In re Rice is misplaced.

In re Woodruff

As discussed in the Fifth Amend, the Sixth OA’s statement that “[w]here the difference between the claimed invention and the prior art is some range or other variable within the claims the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range” (Sixth OA, p. 6) demonstrates a misplaced reliance on In re Woodruff, 16 USPQ2d 1934 (Fed. Cir. 1990) (copy submitted with the Fifth Amend).

Applicants submit that the Safety Code for Elevators and Escalators A17.1 (issued by the American Society of Mechanical Engineers), paragraph 2.20.4, requires a minimum diameter of 9.5 mm for hoisting and

counterweight ropes. Applicants also submit that a person having ordinary skill in the art (“PHOSITA”) generally is not motivated to intentionally violate safety codes set up by standard-setting organizations in their field. Thus, Applicants’ ability to make a safe and reliable elevator in which each hoisting rope of the plurality of parallel hoisting ropes has a nominal diameter greater than 5 mm and less than 7 mm demonstrates both utility and nonobviousness, in that it achieves unexpected results. For at least these reasons, Applicants submit that the Sixth OA’s reliance on In re Woodruff is misplaced.

In re Keller and In re Merck

Applicants submit—at least to the extent that Applicants’ arguments point out specific misinterpretations of individual references of the cited art in the Sixth OA (or other Office Actions)—Applicants are not “attacking references individually” (see In re Keller, 208 USPQ 871 (CCPA 1981) and In re Merck, 231 USPQ 375 (Fed. Cir. 1986)). In other words, Applicants’ arguments are not attempting to read the individual references in isolation as opposed to what the references fairly teach in combination with the prior art as a whole, but attempting to correct and/or clarify specific misinterpretations of the individual references used as a basis for determining what the references fairly teach in combination with the prior art as a whole.

Request for Reconsideration and Allowance

Accordingly, in view of the above amendments and remarks, reconsideration of the rejections and allowance of each of claims 22-42 in

connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

If necessary, the Director of the USPTO is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; in particular, extension of time fees.

Respectfully submitted,

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